

Artichokes

Information compiled by the California Artichoke Advisory Board

How Produced – The artichoke is a perennial plant in the thistle group of the sunflower (Compositae) family. The vegetable we eat is the plant's flower bud.

The historical method for propagation is vegetative, where plant root sections attached to basal stem pieces called "stumps" are planted into the ground. More recently, growers are planting from seed on an annual basis. Generally, perennial artichoke plants are maintained for five to 10 years. Each cropping cycle is initiated by "cutting back" the plant tops several inches below the soil surface to stimulate new shoot growth. The fern-like plants commonly grow to be four feet high and six feet wide.

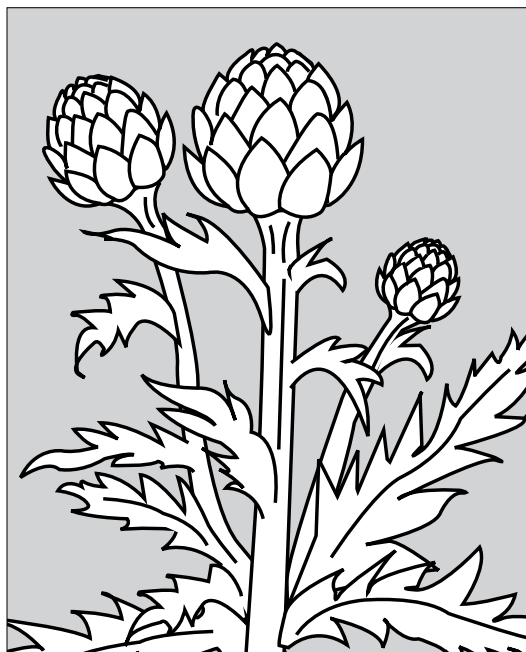
Artichokes are an extremely labor intensive crop with labor representing 40 to 60 percent of the growing costs. Artichokes are harvested entirely by hand. Because artichokes on the same plant mature at different times, the same field will be harvested every seven days and even more often during the peak season of March through May. Artichokes are sorted and packed in the field, by hand, into waxed cartons and immediately trucked to cooling facilities where they are refrigerated to 34 degrees Fahrenheit.

Varieties – The thorny *Green Globe*® is the predominant variety grown on California's central coast from south of San Francisco to Monterey. Other varieties such as *Imperial Star*, *Big Heart*® and *Desert Globe*®, grow in the Central Valley and desert areas of the state. They are characterized as "thornless" and "semi-thornless."

Although it is not an entirely different variety, California winter frosts can yield "frost kissed" artichokes that are available in stores for a limited time. Frost causes the outer layer of the artichoke to turn brown, flake and peel, much like we do after being sunburned. Artichokes are "frost kissed" when the temperature drops below 32 degrees. Following a freeze, artichoke plants take two to three weeks to start producing "frost free" artichokes again. Many believe frost enhances the flavor of the artichoke resulting in a nutty taste.

Commodity Value – California produces virtually 100 percent of the nation's supply of fresh artichokes. The artichoke industry provides hundreds of jobs and annually contributes

more than \$150 million to the state's economy. The 2008-2009 crop year produced more than 4,458,642 cartons of artichokes, weighing 23 pounds each, on 8,554 acres statewide.



Top Producing Counties – The artichoke is the official vegetable of Monterey County where approximately 75 percent of the state's artichokes are grown. In 2008, artichokes ranked 14th in crop value for this agriculturally rich area. Other top producing counties include San Luis Obispo, Ventura, San Mateo and Santa Cruz.

History – Artichokes are one of the oldest known foods. They were cultivated in the Mediterranean basin thousands of years ago. Theophrastus, an Ancient Greek philosopher and naturalist (317 B.C. – 287 B.C.), wrote of them being grown in Italy and Sicily.

During the late nineteenth century, California's first commercial artichoke fields were planted by Italian immigrants south of San Francisco near Half Moon Bay. The modern artichoke industry started during the 1920s in Castroville, California. Today, Castroville is the self-proclaimed "Artichoke Center of the World."

Nutritional Value – Artichokes are fun to eat and good for you. One 12-ounce artichoke contains 25 calories, is low in sodium and contains no fat or cholesterol. One medium artichoke is an excellent source of fiber and vitamin C, and a good source of folate and magnesium. Artichokes also contain phytochemicals, antioxidants in the flavonoid family, which are beneficial in the prevention of certain cancers and boosting the body's immunity. Recent research shows cooked artichokes as the best antioxidant source among all fresh vegetables. Health professionals recommend a low-fat diet with at least five servings of fruits and vegetables each day to reduce the risk of heart disease, diabetes and obesity.

For additional information:

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Artichoke Activity Sheet



◀ #1

Growers plant root cuttings into the ground, cover them with soil and water them.



◀ #2

After about one year, artichoke flower buds are ready for harvest. The largest buds form close to the tops of the stalks.



◀ #3

Artichokes, harvested by hand using small knives, are tossed into packs on the backs of the field workers.

#4 ▶

When the packs are full, the artichokes are transferred to bins or directly to field packing machines.



#5 ▶

Artichokes are sorted and packed by hand into waxed cartons and refrigerated immediately.



#6 ▶

Artichokes are purchased by consumers and can be a nutritious low-fat component of daily meals.



Lesson Ideas

- Using the data provided under "Commodity Value," calculate the total weight of artichokes produced annually and determine the yield (in pounds) per acre.
- By contributing millions of dollars to the state's economy, the artichoke industry provides many jobs in California. Brainstorm a list of careers related to this industry.
- Create a picture book showing the cultivation and harvest methods of artichokes.
- Cook and serve artichokes as a snack. Serve with low-fat dips your students create.
- Find out why vitamin C, magnesium and folate are important in one's diet.
- Research the climate in your county and determine what variety of artichoke, if any, would best grow in your community.
- Dissect an artichoke and label its parts.
- Research the vegetative propagation methods of artichokes. Find out what other plants are propagated in this way.
- Analyze the geometric arrangement of artichoke leaves on the flower.

Fantastic Facts

1. What state produces virtually 100 percent of the nation's commercial artichoke crop?
 2. How long do artichoke plants generally stay in the field?
 3. List one reason artichokes can be a part of a healthy diet.
 4. How are artichokes harvested?
 5. What is the most expensive part of growing artichokes?
 6. What California county proclaims the artichoke as its official vegetable?
 7. Who began the commercial production of artichokes in California?
 8. Name one reason artichoke production is so labor intensive.
- 1) California 2) Five to 10 years 3) Low in fat and cholesterol; contain fiber, vitamin C and other minerals; contains phytochemicals 4) By hand 5) The labor 6) Monterey 7) Italian immigrants 8) Hand labor requirements including hand picking and hand packing.

Lesson Plan: Let's Advertise!

Introduction: Many methods are used to promote and advertise products to consumers. This activity encourages students to explore the various persuasion techniques used by advertisers as they develop a commercial for artichokes, artichoke dips or artichoke utensils.

Materials: Resource materials on various advertising techniques, butcher paper, markers and other supplies needed to create student-designed props, video camera with tripod.

Procedure:

1. Discuss various methods of advertising used to persuade a consumer to purchase a product. Classify the commercials according to type (TV, internet, print, radio, etc).
2. Brainstorm a list of various food commercials that students feel are successful in their advertising. Discuss why the commercials are successful.

3. Divide students into groups; have each group decide what they will advertise: artichokes, an artichoke dip or an artichoke utensil.
4. Have each group create a 15 to 20 second commercial, which will promote their item. They must determine what type of commercial they are producing, create a script, design a slogan and/or logo and prepare any props they will need for the commercial.
5. Assign a filming date and time for each group—30 minutes filming time for each group is appropriate. After taping, share the video-taped commercials with the class. Determine the type of commercial each group created and vote on which commercial would be most effective.

